

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 47/64748WO	<b>FOR FURTHER ACTION</b>	
See Form PCT/IPEA/416		
International application No. PCT/GB2005/001229	International filing date (day/month/year) 29.03.2005	Priority date (day/month/year) 30.03.2004
International Patent Classification (IPC) or national classification and IPC INV. F16L1/18		
Applicant STOLT OFFSHORE LIMITED et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> <i>(sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:</i></p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> <i>(sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</i></p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report  <input type="checkbox"/> Box No. II Priority  <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  <input type="checkbox"/> Box No. IV Lack of unity of invention  <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  <input checked="" type="checkbox"/> Box No. VI Certain documents cited  <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application  <input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 27.01.2006	Date of completion of this report 03.08.2006	
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer  Balzer, R Telephone No. +31 70 340-4058	
		

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/GB2005/001229

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on
  - the international application in the language in which it was filed
  - a translation of the international application into , which is the language of a translation furnished for the purposes of:
    - international search (under Rules 12.3(a) and 23.1(b))
    - publication of the international application (under Rule 12.4(a))
    - international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements\*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

**Description, Pages**

1-21 as originally filed

**Claims, Numbers**

1-22 received on 31.01.2006 with letter of 27.01.2006

**Drawings, Sheets**

1/14-14/14 as originally filed

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

- The amendments have resulted in the cancellation of:
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):
- This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-22
	No: Claims	
Inventive step (IS)	Yes: Claims	8
	No: Claims	1-7,9-22
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rule 70.10)  
and /or
2. Non-written disclosures (Rule 70.9)

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)

International application No.  
PCT/GB2005/001229

Reference is made to the following document/s/:

D1: US-A-4 721 411 (RECALDE ET AL) 26 January 1988 (1988-01-26)

**1. CLAIM 1**

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

Document D1 discloses (the references in parentheses applying to this document): apparatus (10) for laying elongate articles from a vessel at sea, the apparatus comprising tensioning means (1114) for controlling paying out of said articles along an axis of said tensioning means, a structure tiltable (1112) between upright and horizontal states, wherein the apparatus is operable in a first mode wherein the tensioning means is carried by said structure with its axis at an elevated angle, aligned with a departure angle of the article being laid, and in a second mode wherein the tensioning means is arranged with its axis substantially horizontal, the apparatus in the second mode comprising overboarding means for receiving flexible elongate product from the tensioning means along said axis.

The subject-matter of claim 1 therefore differs from this known apparatus in that it is diverting the flexible pipe to a more vertical angle for departure from the vessel.

The problem to be solved by the present invention may therefore be regarded as laying a flexible conduit from horizontal position.

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

The feature, to provide a means for diverting the flexible pipe to a more vertical angle is described in the sixth embodiment of document D1 (Fig. 45) as providing the same advantages as in the present application. The skilled person would therefore regard it as a normal design option to combine the two embodiments of document D1 in order

to solve the problem posed.

**2 INDEPENDENT CLAIM 15**

The present application does not meet the criteria of Article 33(1) PCT, because the method of claim 15 does not involve an inventive step in the sense of Article 33(3) PCT.

Document D1, which is considered to represent the most relevant state of the art, discloses a method of configuring an apparatus for laying elongate articles from a vessel at sea comprising the apparatus of claim 1, with the method steps of - moving the structure between the upright position and the horizontal position and - locating certain operating equipment for operation with the structure in the particular mode of operation, from which the method of claim 15 differs in that it is not stated explicitly that certain operating equipment is detached from the structure before moving it and in that the apparatus does not have overboarding means for diverting the flexible elongate product to a more vertical angle.

The problem to be solved by the present invention may therefore be regarded as preparing the tiltable structure for its use and in laying a flexible elongate product from the horizontal position.

The solution proposed in claim 15 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

Removing certain operating equipment, that is not needed from a structure prior its use and providing means for diverting the flexible pipe for departure from the vessel, are normal, obvious method steps which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the method of claim 15 lacks an inventive step.

**3 DEPENDENT CLAIMS 2-7, 9-14, 16-22**

Dependent claims 2-7, 9-14, 16-22 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT

in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

**4 DEPENDENT CLAIM 8**

The combination of the features of dependent claim 8 is neither known from, nor rendered obvious by, the available prior art. The reasons are as follows:

The available prior art doesn't show a tiltable structure suitable of carrying the tensioning means for deploying the product in a first mode, and to be able to be operated to support in-line accessories as the product travels over the overboarding means.

The feature of having a tiltable structure that can be used for other purposes, when the product is deployed horizontally is not obvious.

The amendments filed with the International Bureau under Article 19(1) appear to introduce subject-matter which extends beyond the content of the application as filed. The amendments concerned are the following:

Claim 1: "...the overboarding means ... (are) diverting it (the flexible elongate product) to a more vertical angle...".

In the application as originally filed, it is only stated that " the overboarding sheave ... support it (the flexible pipe) as it is diverted to a more vertical..." (description page 17, lines 3-5).

Since from the wording in claim 1, the overboarding means includes parts for actively diverting the flexible pipe, which are not mentioned in the original application, this amendment is not allowable.

The same reasoning applies for the same amendment in claims 15 and 22.

**Re Item VI**

**Certain documents cited**

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

PCT/GB2005/001229

**Certain published documents**

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 2004/068012	12.08.2004	30.01.2004	31.01.2003

**Re Item VII**

**Certain defects in the international application**

Claim 7 is unclear, because its subject matter relate to a method of using the apparatus (...tensioning means is detached...) rather than clearly defining the apparatus in terms of its technical features. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.